

Power Quality Equipment Market Forecasts to 2032 – Global Analysis By Equipment Type (Voltage Regulators, Harmonic Filters, Surge Protection Devices, Uninterruptible Power Supplies, Static VAR Compensators and Power Conditioners), Phase, Technology, End User, and By Geography.

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Abstracts

According to Statistics MRC, the Global Power Quality Equipment Market is accounted for \$33.8 billion in 2025 and is expected to reach \$51.8 billion by 2032 growing at a CAGR of 6.3% during the forecast period. Power Quality Equipment refers to electrical devices and systems designed to monitor, regulate, and improve the stability and reliability of power supply within electrical networks. These solutions mitigate disturbances such as voltage sags, harmonics, transients, flicker, and power factor issues that can disrupt operations or damage sensitive equipment. Commonly deployed across industrial, commercial, and utility sectors, power quality equipment supports grid efficiency, enhances asset performance, ensures regulatory compliance, and reduces downtime driven by poor power conditions.

Market Dynamics:

Driver:

Increasing grid instability and outages

Increasing grid instability and frequent power outages are significantly driving demand for power quality equipment across industrial, commercial, and utility end users. Aging transmission infrastructure, rising electricity consumption, and higher penetration of

intermittent renewable energy sources have intensified voltage fluctuations and harmonic distortions. Fueled by the need to protect sensitive electronic systems, manufacturers are increasingly deploying voltage regulators, surge protectors, and UPS solutions. This driver is further reinforced by stricter grid reliability standards and growing digitalization across end-use industries.

Restraint:

High installation and maintenance costs

High installation and maintenance costs remain a key restraint limiting widespread adoption of power quality equipment, particularly among small@@- @@and medium-sized enterprises. Advanced systems such as dynamic voltage restorers and active harmonic filters require substantial upfront capital investment, skilled labor, and periodic servicing. Spurred by budget constraints, many end users delay upgrades or opt for basic solutions with limited capabilities. Additionally, complex retrofitting requirements in legacy infrastructure further elevate deployment costs, thereby restraining market penetration in cost-sensitive regions.

Opportunity:

Industrial automation and grid upgrades

Expanding industrial automation and ongoing grid modernization initiatives present lucrative growth opportunities for the power quality equipment market. As industries adopt robotics, automation systems, and digitally controlled machinery, the need for stable and high-quality power supply intensifies. Motivated by efficiency gains and reduced downtime, utilities and industrial operators are investing in advanced power conditioning solutions. Furthermore, government-led smart grid projects and infrastructure upgrades in emerging economies are creating sustained demand for sophisticated power quality monitoring and mitigation technologies.

Threat:

Availability of low-cost alternatives

The availability of low-cost and substandard alternatives poses a significant threat to established power quality equipment manufacturers. In price-sensitive markets, end users often opt for inexpensive passive devices or unbranded solutions that offer limited

performance and shorter lifecycles. This trend exerts pricing pressure on premium vendors and impacts profit margins. Additionally, inconsistent quality and lack of certification among low-cost products can distort competitive dynamics, making it challenging for technologically advanced solutions to justify higher pricing despite superior reliability and performance benefits.

Covid-19 Impact:

The COVID-19 pandemic had a mixed impact on the power quality equipment market. Initial lockdowns disrupted manufacturing operations, supply chains, and project installations, leading to short-term demand contraction. However, as industries resumed operations, the emphasis on operational resilience, data centers, healthcare facilities, and critical infrastructure boosted demand for reliable power solutions. Accelerated digital transformation and remote working models further increased the need for uninterrupted power supply systems, enabling the market to recover steadily in the post-pandemic period.

The uninterruptible power supplies segment is expected to be the largest during the forecast period

The uninterruptible power supplies segment is expected to account for the largest market share during the forecast period, resulting from its critical role in ensuring continuous power availability. UPS systems are widely deployed across data centers, healthcare facilities, manufacturing plants, and commercial buildings to prevent downtime and equipment damage. Driven by increasing dependence on sensitive electronics and mission-critical operations, demand for UPS solutions continues to rise. Their versatility, scalability, and proven reliability position UPS as a dominant segment within the market.

The three phase segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the three phase segment is predicted to witness the highest growth rate, propelled by rising demand from industrial and large commercial applications. Three phase systems offer superior power handling capacity, improved efficiency, and enhanced voltage stability, making them ideal for heavy machinery and high-load environments. Spurred by industrial expansion, urban infrastructure development, and growing adoption of automation systems, three phase power quality equipment is increasingly preferred over single phase solutions in high-capacity power

networks.

Region with largest share:

During the forecast period, the Asia Pacific region is expected to hold the largest market share, attributed to rapid industrialization, expanding manufacturing bases, and large-scale infrastructure development. Countries such as China, India, and Southeast Asian nations are witnessing rising electricity demand and grid stress, fueling adoption of power quality solutions. Supported by government investments in smart grids and renewable integration, the region's strong presence of industrial facilities and data centers further strengthens its dominant market position.

Region with highest CAGR:

Over the forecast period, the North America region is anticipated to exhibit the highest CAGR associated with advanced grid modernization initiatives and high penetration of digital infrastructure. The region's strong focus on smart grids, data centers, electric vehicle charging networks, and renewable energy integration drives demand for sophisticated power quality equipment. Additionally, strict regulatory standards, high awareness of power reliability, and continuous technological advancements by key market players support accelerated growth across the U.S. and Canada.

Key players in the market

Some of the key players in Power Quality Equipment Market include Schneider Electric, ABB Ltd., Siemens AG, Eaton Corporation, General Electric, Mitsubishi Electric, Vertiv Group, Socomec Group, Legrand SA, Emerson Electric, Toshiba Energy Systems, Fuji Electric, Hitachi Energy, Delta Electronics and Huawei Technologies.

Key Developments:

In Sep 2025, Siemens introduced its SIVACON S8 Next-Gen Low Voltage Switchgear, integrating advanced digital monitoring and power quality modules to improve voltage stability, harmonic filtering, and predictive maintenance for industrial and utility customers.

In Aug 2025, ABB launched the PQF Active Filter Series Upgrade, designed to mitigate harmonics and voltage fluctuations in renewable-heavy grids, enhancing efficiency and reliability for commercial and industrial facilities.

In Jul 2025, Schneider Electric announced the EcoStruxure Power Quality Advisor 2025, a cloud-based analytics platform that provides real-time visibility into power disturbances, automatically generating corrective recommendations and maintenance schedules for critical infrastructure.

Equipment Types Covered:

Voltage Regulators

Harmonic Filters

Surge Protection Devices

Uninterruptible Power Supplies

Static VAR Compensators

Power Conditioners

Phases Covered:

Single Phase

Three Phase

Medium Voltage

Low Voltage

High Voltage

Custom Configurations

Technologies Covered:

Analog-Based Power Quality Systems

Digital Signal Processing (DSP)-Enabled Equipment

Microcontroller-Based Devices

AI-Driven Predictive Quality Systems

End Users Covered:

Utilities

Industrial Users

Commercial Enterprises

Data Center Operators

Renewable Energy Operators

Government Facilities

Regions Covered:

North America

US

Canada

Mexico

Europe

Germany

UK

Italy

France

Spain

Rest of Europe

Asia Pacific

Japan

China

India

Australia

New Zealand

South Korea

Rest of Asia Pacific

South America

Argentina

Brazil

Chile

Rest of South America

Middle East & Africa

Saudi Arabia

UAE

Qatar

South Africa

Rest of Middle East & Africa

What our report offers:

- Market share assessments for the regional and country-level segments
- Strategic recommendations for the new entrants
- Covers Market data for the years 2024, 2025, 2026, 2028, and 2032
- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)
- Strategic recommendations in key business segments based on the market estimations
- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments
- Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical

presence, and strategic alliances

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